Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1–19 cancelled

Claim 20 (original): A device for the analysis of one or more samples, comprising:

a substrate;

a plurality of adjacently arranged channels formed in the substrate, with each channel having an inlet end and an outlet end, the channels being disposed spaced apart from one another, with each adjacent pair of channels being separated by a respective portion of the substrate that includes at least a region that is transparent and at least a region that comprises a non-fluorescent quencher; and

an excitation-beam source adapted to direct an excitation beam of light along a beam path that intersects each of the channels at a region between the inlet and outlet ends and further intersects the transparent region of the substrate separating adjacent pairs of channels.

Claim 21 (original): The device of claim 20, further comprising a cover member positioned adjacent the substrate, over the channels.

Claim 22 (original): The device of claim 21, further comprising an emission detection system optically coupled to a region within each channel along the beam path.

Claim 23 (original): The device of claim 20, wherein the substrate is a plate, slide, wafer, or chip comprised at least in part of an optically clear material.

Claim 24 (original): The device of claim 20, wherein the substrate is a monolithic structure.

Claim 25 (original): The device of claim 20, wherein the substrate is a multi-laminate structure.

Claim 26 (original): The device of claim 20, wherein each channel includes opposed sidewall regions including portions that are substantially parallel to one another.

Claim 27 (original): The device of claim 26, wherein the transparent region comprises, at least in-part, the parallel portions, and wherein the beam path extends through the parallel portions.

Claim 28 (original): The device of claim 20, further comprising a coating on one or more portion of the plurality of separation channels, wherein the coating includes the non-fluorescent quencher.

Claim 29 (original): The device of claim 20, wherein the non-fluorescent quencher is incorporated into the substrate.

Claim 30 (original): The device of claim 20, wherein at least a portion of one or more of the plurality of separation units comprises a reporter dye, wherein the reporter dye includes FAM, and wherein the non-fluorescent quencher includes at least one of Methyl Orange, Disperse Red 13, Basic Violet 14, Basic Red 9, and non-fluorescent dyes having an absorbance with a λ-max at about 520 nm.

Claim 31 (original): The device of claim 20, wherein at least a portion of one or more of the plurality of separation units comprises a reporter dye, wherein the reporter dye includes ROX and wherein the non-fluorescent quencher includes at least one of Malachie Green, Ethyl Violet, Fast Green FCF, Brilliant Green, Crystal Violet, and non-fluorescent dyes having an absorbance with a λ-max at about 605 nm.

Claim 32 (original): The device of claim 20, wherein at least a portion of one or more of the plurality of separation units comprises a plurality of reporter dyes and a plurality of non-fluorescent quenchers, wherein the plurality of non-fluorescent quenchers includes at least two non-fluorescent quenchers with different λ-max absorbance values.

Claim 33 (original): A device for the analysis of one or more samples, comprising:

a substrate including one or more regions, the one or more regions including a material that comprises a non-fluorescent quencher;

a plurality of adjacently arranged channels formed in the substrate, wherein each channel includes an inlet end and an outlet end and the channels are disposed in spaced relation relative to one another, with each adjacent pair of channels being separated by a respective portion of the substrate;

a transverse channel in the substrate transverse to and passing through each of the plurality of adjacently arranged channels in the substrate; and

an excitation-beam source adapted to direct an excitation beam of light along a beam path that intersects each of the channels at a region between the inlet and outlet ends, wherein the beam path is along the transverse channel.

Claim 34 (original): The device of claim 33, wherein at least a portion of the substrate in each of the separation channels includes a non-fluorescent quencher dye.

Claim 35 (original): The device of claim 33, wherein the separation channels are non-intersecting.

Claim 36 (original): The device of claim 33, wherein the substrate is a plate, slide, wafer, or chip; and wherein the separation channels are microfabricated therein.

Claim 37 (original): A device for the analysis of one or more samples, comprising:

a plurality of sample-containment units, each sample-containment unit including an open end and a closed end and an interior portion between the ends;

an excitation source adapted to direct an excitation beam of light along a beam path that intersects the interior portion of each of the sample-containment units at a region between the open and closed ends; and

an emission detection system optically coupled to the interior portion of the separation units, in the vicinity of the beam path,

wherein at least a portion of one or more of the plurality of sample-containment units comprises a non-fluorescent quencher.

Claim 38 (original): The device of claim 37, further comprising an optical coating or element on one or more regions of the sample-containment units.

Claim 39 (original): The device of claim 37, further comprising a cover member positioned over the sample-containment units.

Claim 40 (original): The device of claim 39, further comprising an optical coating or element on the cover.

Claim 41 (original): The device of claim 37, wherein each sample-containment unit is continuous from its open end to its closed end.

Claim 42 (original): The device of claim 37, wherein the units comprise separate respective sample vials.

Claim 43 (original): The device of claim 37, wherein the excitation-beam source comprises at least one laser.

Claim 44 (original): The device of claim 43, wherein the device further comprises a substrate, the substrate comprises first and second lateral sides, the beam path extends between the first and second lateral sides, and at least one laser is configured to emit a beam that enters the device along the beam path from each of the first and second lateral sides.

Claim 45 (original): The device of claim 44, wherein the substrate includes a transparent region between the first and second lateral sides, and the beam path extends along the transparent region.

Claim 46 (original): The device of claim 37, wherein each sample-containment unit includes opposed sidewall regions including portions that are substantially parallel to one another.

Claim 47 (original): The device of claim 46, wherein the beam path extends through the parallel portions.

Claim 48 (original): The device of claim 47, wherein the parallel portions, through which the beam path extends, are transparent to at least a selected wavelength range of light.

Claim 49 (original): The device of claim 37, wherein the device further comprises a substrate, and the substrate includes at least one transverse channel transverse to and passing through at least some of the plurality of units, and wherein the beam path extends through the transverse channel.

Claim 50 (original): The device of claim 37, wherein the non-fluorescent quencher is coated on one or more portion of one or more of the plurality of separation units.

Claim 51 (original): The device of claim 37, wherein the non-fluorescent quencher is incorporated into the sample-containment units.

Claim 52 (original): The device of claim 37, further comprising a substrate, wherein the sample-containment units are an array of sample-containment units that are adapted to be placed into the substrate.

Claim 53 (original): A method of forming a device, comprising:

providing a substrate material and a non-fluorescent quencher;

forming a substrate from the substrate material and the non-fluorescent quencher, wherein the substrate includes a plurality of adjacently arranged channels, each channel having an inlet and an outlet end, the channels being disposed in spaced relation to each other.

Claim 54 (original): The method of claim 53, further comprising coating at least a portion of the substrate with a coating material, wherein the coating material comprises the at least one non-fluorescent quencher.

Claim 55 (original): The method of claim 53, further comprising:

mixing the substrate material with the at least one non-fluorescent quencher.

Claim 56 (original): The method of claim 53, further comprising:

retaining one or more non-fluorescent quenchers in alternating channels of the plurality of adjacently arranged channels.

Claim 57 (original): A method of forming a device, comprising:

providing a substrate material and a non-fluorescent quencher;

forming a substrate from the substrate material and the non-fluorescent quencher, wherein the substrate includes a plurality of adjacently arranged separation units, each separation unit having an inlet and an outlet end, the separation units being disposed in spaced relation to each other.

Claim 58 (original): The method of claim 57, further comprising coating at least a portion of the substrate with a coating material, wherein the coating material comprises the at least one non-fluorescent quencher.

Claim 59 (original): The method of claim 57, further comprising:

mixing the substrate material with the at least one non-fluorescent quencher.

Claim 60 (original): The method of claim 57, further comprising:

retaining one or more non-fluorescent quenchers in alternating separation units.

Claims 61-64 cancelled